



PATENT
Attorney Docket No. P06331US01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT : LI, et al.
SERIAL NO : 10/628,296
FILED : July 28, 2003
TITLE : PLANT CELL WALL LOOSENING ACTIVITY OF GROUP 2/3
ALLERGENS OF GRASS POLLEN

**INFORMATION DISCLOSURE STATEMENT
FILED WITHIN THREE MONTHS OF FILING OR
BEFORE MAILING OF FIRST OFFICE ACTION (37 C.F.R. § 1.97(b))**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This information disclosure statement is being filed within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office Action on the merits, or before the mailing of a first office action after the filing of a request for continued examination, whichever event occurs last.

Attached are Forms PTO/SB/08A and 08B (formerly Form PTO-1449) listing the relevant art known to the applicant herein. Copies of the references are enclosed. The Examiner is requested to consider the references and make them of record.

Applicants disclose herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of

CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))

I hereby certify that this correspondence is, on the date shown below, being:

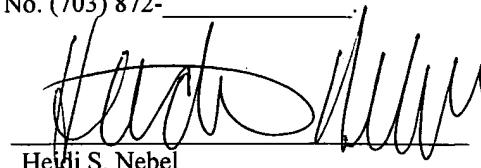
MAILING

deposited with the United States Postal Service with sufficient postage as First Class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: 2/4/04

FACSIMILE

transmitted by facsimile to the Patent and Trademark Office, Art Unit _____ at Fax No. (703) 872-_____


Heidi S. Nebel

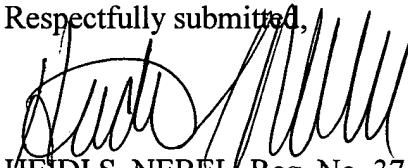
which, there may be a duty to disclose. Legible copies of all items listed in Forms PTO/SB/08A and 08B (formerly Form PTO-1449) accompany this information statement, except those identified above.

Several items of information contained in this information disclosure statement were cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement. Also attached is a copy of the International Search Report.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. § 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner.

Respectfully submitted,



HEIDI S. NEBEL, Reg. No. 37,719
McKEE, VOORHEES & SEASE, P.L.C.
801 Grand Avenue, Suite 3200
Des Moines, Iowa 50309-2721
Phone No. (515) 288-3667
Fax No. (515) 288-1338
CUSTOMER NO: 27407

- pw -

Attorneys of Record



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/628,296
				Filing Date	July 28, 2003
				First Named Inventor	Li, et al.
				Art Unit	1638
				Examiner Name	
(Use as many sheets as necessary)					
Sheet	1	of	2	Attorney Docket Number	
P06331US01					

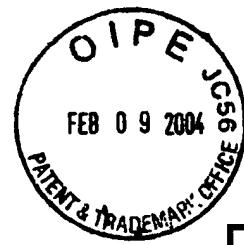
Examiner Signature		Date Considered	
-------------------------------	--	----------------------------	--

*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Form PTO/SB/08B (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/628,296
(Use as many sheets as necessary)				Filing Date	July 28, 2003
Sheet	2	of	2	First Named Inventor	Li, et al.
				Group Art Unit	
				Examiner Name	
				Attorney Docket Number	P06331US01

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS					
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T ²
	1	Ansari, Aftab A., et al. "Complete Primary Structure of a <i>Lolium perenne</i> (Perennial Rye Grass) Pollen Allergen, Lol p III: Comparison with Known Lol p I and II Sequences", 1989 American Chemical Society			
	2	Brenner et al., "Assessing sequence comparison methods with reliable structurally identified distant evolutionary relationships", Proc. Natl. Acad. Sci. USA 95:6073-6078 (1998)			
	3	McQueen-Mason, Simon, et al. "Disruption of hydrogen bonding between plant cell wall polymers by proteins that induce wall extension" Proc. Natl. Acad. Sci. USA, Vol 91, pp. 6574-6578, July 1994			
	4	Cosgrove, Daniel J. "Loosening of Plant Cell Walls by Expansins" NATURE Vol. 407121 September, 2000			
	5	Grobe, Kay, et al. "Properties of group I allergens from grass pollen and their relation to cathepsin B, a member of the C1 family of cysteine proteinases" Eur. J. Biochem 269, 2083-2092 (2002)			
	6	Li, Lian-Chao, et al. "Grass group I pollen allergens (β -expansins) lack proteinase activity and do not cause wall loosening via proteolysis" Eur. J. Biochem. 268. 4217-4226 (2001)			
	7	McQueen-Mason et al., "Disruption of hydrogen bonding between plant cell wall polymers by proteins that induce wall extension", Proc. Natl. Acad. Sci. USA 91:6574-6578 (1994)			
	8	McQueen-Mason et al., "Expansin Mode of Action on Cell Walls", Plant Physiol. 107:87-100 (1995)			
	9	Nagy, "A glance posterior" Current Biology 4:811-814 (1994)			
	10	Nishitani et al., "Endo-xyloglucan Transferase, a Novel Class of Glycosyltransferase That Catalyzes Transfer of a Segment of Xyloglucan Molecule to Another Xyloglucan Molecule", The J. of Biological Chemistry, 267(29):21058-21064 (1992)			
	11	Skolnick et al., "From genes to protein structure and function: novel applications of computational approaches in the genomic era", TIBTECH 18:34-39 (2000)			
	12	Taiz, "Expansins: Proteins that promote cell wall loosening in plants", Proc. Natl. Acad. Sci. USA 91:7398-7389 (1994)			
	13	Wu et al., "Analysis and Expression of the α -Expansin and β -Expansin Gene Families in Maize", Plant Physiology 126:222-232 (2001)			

Examiner Signature	Date Considered
--------------------	-----------------

* EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.